IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Takeshi SHIMIZU et al.

Application No.: 09/974,055

Filed: October 11, 2001

For: HYPERMEDIA DOCUMENT AUTHORING

On Appeal from Group: 2178

Examiner: C. Huynh

Docket No.: 028918.01

APPEAL BRIEF TRANSMITTAL

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Respectfully submitted,

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BRIEF ON APPEAL

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I.   INTRODUCTION

This is an Appeal from an Office Action mailed December 17, 2002, finally rejecting claims 1-22 of the above-identified patent application.

A.   Real Party in Interest

The real party in interest in this Appeal in the present application is Xerox Corporation by way of an Assignment filed on September 1, 1999, and recorded at Reel 010204/Frame 0560.

B.   Statement of Related Appeals and Interferences

There are presently no appeals or interferences, known to Appellants, Appellants' representative or the Assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

C.   Status of Claims

Claims 1-22 are pending. Claims 1-22 are on appeal. Claims 1-22 are set forth in the attached Appendix. Claims 1 and 10 are independent claims. Claims 2-4, 6, 9, 21 and 22 depend directly from claim 1. Claims 5, 7 and 8 depend indirectly from claim 1. Claims 11-13, 15 and 18-20 depend directly from claim 10.   Claims 14, 16 and 17 depend indirectly from claim 10.

D.   Status of Amendments

The Amendment filed on June 14, 2002 is the only Amendment filed, and the Amendment has been entered. Independent claims 1 and 10, as amended, are found in the June 14, 2002 Amendment. Claims 2-9 and 11-22 are originally filed claims, which have not been amended.

II.   SUMMARY OF THE INVENTION AND APPLIED REFERENCES

A.   Related Art Problems Overcome by the Invention

Authoring systems are based on cognitive models for how writing takes place. For example, University of North Carolina's Writing Environment provides four workspaces called the network mode, the tree mode, the editor mode and the text mode. The Writing Environment is based on a cognitive model that reflects the need to organize resources before writing and to structure outlines according to both logical and presentational criteria.

Other authoring systems that provide a variety of similar features are summarized as follows: One, called SEPIA, is a hypermedia authoring system that has four workspaces: 1) content space, 2) rhetorical space, 3) planning space, and 4) argumentation space. Another, called CMIF provides: 1) a hierarchy view to edit the hierarchy of a hypermedia document; and 2) a channel view to specify synchronization among the components.

However, none of the above authoring schemes support an explicit representation of relationships between the logical and presentational organizations of the document being authored. In addition, current techniques do not provide sufficient support for navigating through the information represented by the workspaces.

B.   Features of the Invention

One set of features provided by the invention includes a hypermedia authoring system that enables an author to generate a document using a goals outline and a presentation outline and a technique usable to relate the goals and the presentation outlines. The goals outline organizes the information content of the document contained in cards in a logical structure. The presentation outline is directed to a physical appearance of the document.

Another set of features provided by the invention generates a goals outline by instantiating document prototypes that contain slots which indicate a type of information that is to be included in the document prototype. Each of the slot types may be linked to the cards

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by links which may be mandatory, optional or defined by the user. A visual display of the goals outline permits the author to select a prototype document from a directory of prototype documents and instantiate the selected prototype document that corresponds to a node of the goals outline. Once a document prototype is instantiated, the hypermedia authoring system provides a display that permits the author to link each of the slot types of an instantiated document prototype with cards in a card database. Cards may also be created from scratch by the author or imported from external sources and linked with the instantiated document prototype.

An additional set of features provided by the invention includes a display usable to create a presentation outline in the form of Bento-box representation. Each Bento-box representation includes a layout workspace in which spacer objects may be placed. Spatial and temporal parameters may also be specified corresponding to each spacer object. The spacer objects may be linked to cards in the card database. An indication of a link relationship with the goals outline is also provided. When a spacer object is linked to a card that is also linked to a node in the goals outline, the Bento-box representation indicates such a goals outline relationship. Thus, while constructing a presentation outline, the author is also informed of the portions of the goals outline that is addressed and vice versa.

A further set of features provided by the invention links the Bento-box representations to each other in a stack for a sequential slide presentation, for example. In addition, the Bento-boxes may be hyperlinked to other Bento-box representations where anchors for the hyperlink may be within any of the spacer objects. Thus, a display of all the Bento-box representations of a hypermedia document including the linkages among the Bento-box representations would show a linkage path established by the hyperlinks between Bento-box representations.

Yet another set of features provided by the invention selects, in a display of the presentation outline and the linkage paths, one of the Bento-box representation or a Bento-box stack to show specifically the links to and from the selected Bento-box representation.

Still another set of features provided by the invention simultaneously displays the presentation outline, and the goals outline showing the relationship between the presentation outline and the goals outline. For example, if both the presentation outline and the goals outline are displayed and a Bento-box representation is selected in the presentation outline, corresponding nodes in the goals outline are highlighted to indicate the link between the presentation outline and the goals outline based on the cards that are linked to both of the outlines. The highlighting of the selected Bento-box representations and the corresponding nodes of the goals outline may be color coded to indicate a measure of overlap in terms of the number of cards that are common between the selected Bento-box representation and the highlighted nodes of the goals outline. The selection of a node in the goals outline results in similar highlighting of related Bento-box representations.

If a complete presentation outline is selected, the highlighting shows a measure of coverage between the presentation outline and the goals outline. That is, by selecting either the complete presentation outline or the complete goals outline, an indication of coverage in terms of the number of cards linked to both the goals and the presentation outlines as compared to the number of cards that are linked only to one of the goals or presentation outlines.

Another set of features provided by the invention includes a navigation facility based on visual metaphors familiar to the author. For example, a kitchen metaphor may be used where card databases are maintained either in cabinets or the freezer compartment of a refrigerator and the cutting board corresponds to a display of the presentation outline. Similar metaphors may be constructed using other familiar scenes such as an office or a studio.

C.   Description of the Exemplary Embodiments

Figure 1 shows a hypermedia authoring system 100 that includes a goals outline 102, a presentation outline 104 and a card database 106. One or more links 110 are established between the goals outline 102 and the presentation outline 104. Each of the goals outline 102 and the presentation outline 104 are linked to the card database 106 through the links 108 and 112, respectively.

The cards in the card database 106 are information elements (also called points in the application) on which the document being authored is based. That is, the cards contain the actual hypermedia information such as video, sound or text that make up the document being authored. The contents of the points may be appropriated from either external sources or created from scratch by the author.

Figure 2 shows an exemplary set of cards 10-28 in the card database 106. As indicated by the arrows 30-42, the cards 10-28 may be interconnected or "linked". These links may be established as hyperlinks from a source card to an anchor point in a destination card. For example, the text card 10 is hyperlinked to the video card 18 and to the sound and text card 20 via the links 40 and 42, respectively.

Figure 3 shows an example of a goals outline 202. The goals outline 202 may contain a document name and an organization of subject matter of the document to be authored in a logical structure. The goals outline 202 contains outline elements such as "Main Subject 1" and "Main Subject 2." The outline elements "Point A" and "Point B" are logically structured under "Main Subject 1." In contrast, the outline element "Subpoint a" is logically structured under the "Point A." As indicated on the right side of Fig. 3, the outline elements may be visualized in a tree view, such as the tree view 204. The tree view 204 includes nodes 206-214 which corresponds to the outline elements in the goals outline 202.

Each of the nodes 206-214 is associated with a document information type. For example, Nodes 206, 208 and 214 are associated with a description type, while node 210 is associated with a narrative type, and node 212 is associated with an argument type.

A hypermedia document may be authored using the hypermedia authoring system 100 by working with the goals outline or the presentation outline in any order or sequence. If the author prefers to first layout the logical structure of the document and then focus on the document's physical appearance, then the author completes the goals outline first and then the presentation outline. If the physical appearance of the document is to be addressed first, then the presentation outline may be completed before the goals outline. In fact, during the course of document authoring, a process of bouncing back and forth between the goals outline and the presentation outline may be most desirable.

Figure 4 shows a process for generating the goals outline 202 by instantiating document prototypes and linking the instantiated document prototypes with the cards in the cards database 106. On the right side of Fig. 4, document prototypes 302 are shown for some possible document prototype above types, including a description 304, an argument 306 and a narrative 308, among other types that may also be added. There may be multiple kinds of document prototypes for each type of the description 304, the argument 306, and the narrative 308. Some of these prototypes may be constructed by the author as the authoring process progresses, while others may be default prototypes provided to the author.

As an example, the goals outline 202 may be constructed as follows: The author selects from the description document prototype 304 and instantiates the selected prototypes for each of the nodes 206, 208 and 214 of the tree view 204. One of the narrative document prototypes 308 is instantiated and correspond to node 210. An argument document prototype 306 is instantiated and corresponds to the node 212.

Once instantiated, the author may personalize each of the instantiated prototypes by linking the instantiated prototypes to the respective cards in the card database 106. For example, the instantiated description document prototype 304, corresponding to the node 206, may be linked to a card 1 via link 320. The description document prototype 304, corresponding to node 208. may be linked to a card 2 by a link 322. The narrative document prototype 308, corresponding to the node 210, is linked to a card 3 by a link 324. The argument document prototype 306, corresponding to the node 212, and the description document prototype 304, corresponding to the node 214, are similarly linked by the links 326 and 328 to other cards in the card database.

The presentation outline processor 610, as shown in Fig. 7, provides support for the author to generate a presentation outline 104 for the physical appearance of the document. Figure 10 shows a layout workspace 700 where the author may generate a physical appearance of the document spatially as well as temporally by placing spacer objects in a spatial layout area 702 and spacer objects in a sound layout area 704. For example, the author may place visual spacer objects 706-712 and sound spacer objects 714, 716 and 718 as shown in Fig. 10.

In addition to the card link area 804, a Bento-box representation 800 also includes a related goals outline area 806 that shows related goals outline nodes. The related goals outline nodes are goals outline nodes that are linked to cards which are also linked to spacer objects in the Bento-box 800. In addition, icons indicating the types of the related goals outline nodes are shown in the area 805. Thus, Goals OL E is a description type; Goals OL J is a narrative type; and Goals OL B is an argument type based on the legend shown in the legend area 406 of Fig. 8. The Bento-box 800 provides a way to link the presentation outline to the cards in the card database 106 which indirectly also links the presentation outline 104 with the goals outline 102 as indicated by the related goals outline area 806.

Figure 14 shows a stack of Bento-boxes 830, 840 and 850. The Bento-box 830 (titled Bento 1) is displayed first, the Bento-box 840 (titled Bento 2) is displayed second, and the Bento-box 850 (titled Bento 3) is displayed third. Thus, the Bento-boxes 830, 840 and 850 are linked to each other in a stack to indicate a serial presentation of the information contained in each of the Bento-boxes 830, 840 and 850. For example, Fig. 15 shows such a sequence of Bento-boxes 902, 904 and 906, entitled slide #1 (902), slide #2 (904) and slide #3 (906). These Bento-boxes 902-906 are arranged sequentially in a stack so that Bento-boxes 902, 904 and 906 are presented in sequential order as a slide presentation. A Bento-box stack itself may be given a title so that each of a number of the Bento-box stacks may be referenced as a whole when linked to other Bento-boxes and/or Bento-box stacks.

If all the Bento-boxes of the authored document are selected, then the display corresponding to Fig. 19 shows a completeness measure where the number of cards linked to the Bento-boxes are compared to the number of cards linked to the goals outline. Thus, the author is provided an assessment of the progress of the authoring process and the comprehensiveness of the relationship between the goals outline and the presentation outline. This feature provides the author with an indicator of how close the document authoring process is to completion.

Figure 20 shows the converse of the situation shown in Fig. 19. In Fig. 20, a node of the goals outline 102 is selected such as goals outline node 1408, and zero, one or more corresponding Bento-boxes 800 in the presentation outline are also highlighted, for example, the Bento-box 1412. A ratio may be calculated to relate the number of cards linked to the selected goals outline node in the highlighted corresponding Bento-boxes, such as the Bento-Box 1412. Thus, the progress of the document authoring process may be assessed and the relationship between the goals outline and the presentation outline may be obtained.

The navigation processor 606 of the terminal 600 provides a navigation facility to assist the author with a familiar meta-level graphical user interface (GUI), such as a kitchen, an office or a studio, to navigate through the large amount of media data in relationship to the goals and presentation outlines 102 and 104.

Figure 21 shows a display of a kitchen 1500 as the meta-level GUI. The "Recipes" 1504 or 1506 on the corkboard 1502 displays the goals outline 102 (i.e. the logical structures). The cutting board 1508 displays the presentation outline. The Bento-boxes 1510 and 1512 are shown on the cutting board 1508. In addition, the refrigerator 1514 and the cabinets 1516 and 1518 show other possible spaces and organizers for media data.

Similarly, Fig. 22 shows a display of an office 1600 as the meta-level GUI. The planning board 1602 displays the goals outline 102 and the desk mat 1604 displays the presentation outline 104. The filing cabinet 1606 stores and organizes the media data in the form of cards, for example.

Figure 23 shows a display of a studio 1700 as the meta-level GUI. The story board 1702 displays the goals outline 102, the mixer consoles 1704 displays the presentation outline 104. The file cabinet 1706 or the corkboard 1708 stores and organizes the media data.

D.   The Claimed Subject Matter

A full list of claims appears in the Appendix. Applicant reproduces here, eight claims, which are illustrative of the seven groups of claims which do not stand or fall together. In this regard, independent claims 1 and 6, both of which are reproduced here because they are independent claims, stand or fall together,

Independent claim 1 recites a document authoring device for a document which contains a goals outline and a presentation outline, comprising (1) a user interface; (2) a memory; and (3) a controller coupled to the user interface and the memory, wherein the controller links the goals outline and the presentation outline of the document together based

on an input received through the user interface and data stored in the memory to at least partially author the document, and further wherein the goals outline comprises organization of document information content and the presentation outline comprises appearance characteristics of the document.

Dependent claim 2 recites the device of claim 1, wherein the user interface includes a display device. The controller displays a goals outline display on the display device and generates the goals outline based on the input that relates to the goals outline display.

Dependent claim 3 recites the device of claim 2, wherein the memory contains at least one document prototype, and the controller generates a logical structure of the goals outline by instantiating the document prototype selected by the input.

Dependent claim 4 recites the device of claim 3, wherein the memory contains a card, and the controller links the instantiated document prototype to the card selected by the input.

Independent claim 6 recites a method of authoring a document which contains a document goals outline and a document presentation outline, comprising (1) storing data in memory; (2) receiving an input through a user interface; and (3) linking the goals outline to the document presentation outline based on the input and the data to at least partially author the document, wherein the document goals outline comprises organization of document information content and the presentation outline comprises appearance characteristics.

Independent claim 10 recites a method of authoring a document, comprising (1) storing data in a memory; (2) receiving inputs through a user interface; (3) linking a goals outline comprising organization of document information content to a presentation outline based on the inputs and the data; (4) receiving external information by a controller; (5) generating a card based on the external information; and (6) storing the card as data in the memory.

Independent claim 13 recites a method of authoring a document, comprising (1)

storing data in a memory; (2) receiving inputs through a user interface; (3) linking a goals outline comprising organization of document information content to a presentation outline based on the input and the data; and (4) displaying on the display device a meta-level display of the goals outline and the presentation outline.

Dependent claim 14 recites the method of claim 13, wherein the meta-level display is one of a kitchen image, an office image, and a studio image.

E.   The Applied References

1.   U.S. Patent 6,029,182 to Nehab et al.

Nehab et al. (hereinafter, "Nehab") discloses a data retrieval system which automatically traverses hypermedia documents on a computer network and automatically retrieves information from those documents based on a match between the structure of the documents and a personalized data retrieval structure. Nehab can retrieve articles from a news service, from a magazine service, or from a combination of both services which are located on the World Wide Web, a private computer network that supports hypermedia links, or other hypermedia-linked computer system. See col. 1, lines 8-17.

Nehab retrieves articles from a hypermedia-linked computer network and formats the articles into a personalized newspaper or document. A stored personal-news-profile is retrieved. The personal-news-profile includes address data for a site on the hypermedia-linked computer network, command data for accessing data from the site, and newspaper layout commands. The site is accessed based on address data stored in the personal-news-profile, and articles at the site are downloaded based on command data stored in the personal-news-profile. The downloaded articles are flattened into a linear document, and the linear document is formatted into the personalized newspaper or document according to newspaper layout commands stored in the personal-news-profile. See col. 3, lines 15-28

Nehab also retrieves news articles from on-line news services on the World Wide Web and formats the news articles into a personalized newspaper or document. Nehab stores a personal-news-profile which comprises addresses data and command data for accessing data from a Web site and newspaper format commands, retrieves the stored personal-news-profile and accesses the data stored therein, activates a Web reader to contact a Web site based on address data stored in the personal-news-profile, downloads news articles at the contacted Web site based on command data stored in the personal-news-profile, stores the downloaded news articles, and formats the stored news articles into the personalized newspaper or document based on the newspaper format commands stored in the personal-news-profile. See the paragraph bridging cols. 3 and 4.

Nehab formats a hypermedia document into a personalized document. A location of the hypermedia document is specified, a type of the hypermedia document is specified, a scope of data to be retrieved from the hypermedia document is specified, wherein the scope is based on a structure of the hypermedia document, and a format is specified for formatting the data retrieved from the hypermedia document into the personalized document. The hypermedia document found at the specified location is accessed, data is retrieved from the hypermedia document in accordance with the specified hypermedia document type and in accordance with the specified scope, and the data is formatted into the personalized document in accordance with the specified format. See col. 4, lines 12-25.

2.   U.S. Patent 5,347,628 to Brewer et al.

Brewer et al. (hereinafter, "Brewer") discloses a method of graphically accessing electronic data which comprises displaying on a computer screen a graphical representation of a work area. The work area includes at least one animated icon that is movable between a closed position and an open position. The icon is positioned in a contextual setting. For example, the icon may be a drawer in a perspective view of a desk in an office. The method

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includes manipulating a pointing device to move the icon to an open position. Such movement of the icon automatically displays the contents of the icon on the screen. In the preferred embodiment, moving the icon automatically opens a window on the screen. The data being accessed is displayed in the opened window. The size of the opened window is controlled by the position of the icon. When the icon is closed, the opened window is closed. Similarly, when the icon is fully opened, the opened window is at its maximum size. If the user wants simply to see what is in the drawer icon, the user opens the drawer slightly, which opens the window slightly so that the user can look at the data. If the user is finished or does not wish to work with the data in the drawer, the user simply closes the drawer and the data window disappears. See the paragraph bridging cols. 2 and 3, and the preamble to claim 1 of Brewer.

III.   THE ISSUES ON APPEAL

1.   Are claims 1-12 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 6,029,182 to Nehab?

2.   Are claims 13 and 14 properly rejected under 35 USC §103(a) as unpatentable over U.S. Patent 5,347,628 to Brewer?

IV.   GROUPING THE CLAIMS ON APPEAL

Seven distinct groups of claims, which are separately patentable, exist in the application and, upon issuance of a patent, will be entitled to a separate presumption of validity under 35 USC §282. For convenience of handling of this Appeal, the claims are grouped as follows:

Group I: Claims 1 and 6

Group II: Claims 2 and 7

Group III: Claims 3 and 8

Group IV: Claims 4, 5 and 9

Group V: Claims 10-12

Group VI: Claim 13

Group VII: Claim 14

The claims of Group I, i.e., claims 1 and 6, stand or fall together, and are separately patentable from claims 3-5 and 7-14. The claims of Group II, i.e., claims 2 and 7, stand or fall together and are separately patentable from claims 1, 3-6 and 8-14. The claims of Group III, i.e., claims 3 and 8, stand or fall together and are separately patentable from claims 1, 2, 4-7 and 9-14. The claims of Group IV, i.e., claims 4, 5 and 9, stand or fall together and are separately patentable from claims 1-3, 6-8 and 10-14. The claims of Group V, i.e., claims 10-12, stand or fall together and are separately patentable from claims 1-9, 13 and 14. The claim of Group VI, i.e., claim 13, stands or falls alone and is separately patentable from claims 1-12 and 14. The claim of Group VII, i.e., claim 14, stands or falls alone and is separately patentable from claims 1-13. Each group of claims will be argued, separately, below.

V.   LAW

A.   35 USC §103(a) (Obviousness)

In rejecting claims under 35 USC 103, it is incumbent on the examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS

Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish prima facie obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). It is well settled that a rejection based on 35 USC 103 must rest on a factual basis, which the Patent and Trademark Office has the initial duty of supplying. In re GPAC, Inc., 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995). A showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed. Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617. However, the suggestion to combine need not be express and "may come from the prior art, as filtered through the knowledge of one skilled in the art." Motorola,

Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472, 43 USPQ2d 1481, 1489(Fed. Cir. 1997).

It is impermissible for an Examiner to engage in hindsight reconstruction of the claimed invention using appellant's structure as a template and selecting elements from references to fill the page. The references themselves must provide some teaching whereby the appellant's combination would have been obvious. In re Gorman, 911 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed. Cir, 1991). That is, something in the prior art as a whole must suggest the desirability, and thus obviousness, of making the combination. See, In re Beattie, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); Lindemann Machinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984).

VI.   ARGUMENT

A.   Group I, Claims 1 and 6

Claims 1 and 6 are not obvious over Nehab. Claims 1 and 6, inter alia, recite that the goals outline comprises organization of document information content. The final Office Action asserts (1) that, in Nehab et al., Fig. 3A and col. 6, lines 20-57, the tree structure of the homepage site # 21 shows the organization of the homepage 22 content and the extracted data 27 is the organization of the extracted data for the homepage 22.

Applicants respectfully point out that Fig. 3A, which is a graphical display of a typical Web site 21 with news information contained therein, is not "the goals outline . . . of the document" nor is it a "goals outline" which "comprises organization of document information content . . . of the document", as recited.

Applicants recite a "goals outline." As clearly set forth on page 2 of Applicants' specification, "[T]he goals outline organizes the information content of the document . . ." In other words, the goals outline of a document to be authored provides the general organization for the content, i.e., the information content to be communicated to a reader, of the document

to be authored. Fig. 3A is <u>not</u> the organization of the information content of a document to be authored. Rather, Fig. 3A is merely a graphical presentation of the information content of a <u>homepage</u> which includes the links between the individual items of information in the homepage and at least one item on another web-site, and <u>a homepage on the Internet is not a document to be authored by Nehab</u>.

The tree structure of the homepage site 21 shown in Fig. 3A is also is not the claimed goals outline, i.e., is not the organization of the information content of <u>a document to be authored</u>. Rather, it is merely a clone of the organization of data extracted from web sites that "preserves the organization of the data as shown in Fig. 3B." - see col. 6, lines 35-38. Nehab merely adopts the organization of the data in the web sites from which Nehab obtains the data prior to the organization of the document to be created. Nehab's Fig. 3A does not contain the concept of a goals outline as recited.

The final Office Action asserts, for the first time, that the tree structure of the homepage site shows the organization of the extracted data from the homepage. However, this is not the organization of the document to be authored, in contrast to the subject matter recited in claims 1 and 6.

For example, claims 1 and 6, for example, recites linking the goals outline to the document presentation outline based on the input and the data to at least partially author the document, wherein the document goals outline comprises organization of document information content and the presentation outline comprises document appearance characteristics. Nehab does not author the Web page represented by Fig. 3A, nor does Nehab disclose or suggest the recited linking feature.

Claims 1 and 6 recite a goals outline for a document and a presentation outline for the document. Nehab's Fig. 3 relates to a Web based document whereas the presentation outline of Nehab relates to another document that is separate and independent from the web-based

document shown in Fig. 31. The Office Action is addressing two different documents. The Office Action asserts that a Web page document is allegedly the claimed goals outline, and asserts that an entirely separate, personal, document is allegedly the claimed presentation outline, whereas the claims are directed to a goals outline and a presentation outline for the same document. This latest interpretation of Nehab simply does not address the claimed subject matter recited in claims 1 and 6.

Furthermore, any linking in Nehab is of web-site content and personal document format, and web-site content is not an organization of document information content.

The rejection is also traversed based on the lack of proper motivation to one of ordinary skill in the art to modify Nehab to include a controller coupled to a user interface and a memory that links a goals outline comprising organization of document data and a presentation outline for the same document (which is not disclosed in Nehab for the reasons stated above). The Office Action readily admits that Nehab <u>does not</u> disclose that the Nehab's document creating device comprises a controller coupled to the user interface and the memory that links a goals outline and a presentation outline - see the paragraph bridging pages 3 and 4 of the final Office Action.

In an attempt to overcome this admitted shortcoming of Nehab, the office Action engages is classic hindsight reasoning by stating that the "fact that Nehab has the ability of creating a personalized document by <u>combining the data structured in tree form from the websites and the user-defined format suggests that Nehab perform linking these data and so include a linking unit</u>. Otherwise, a personalized document can not be created."
At best this statement is speculation and a rejection under 35 USC §102(e) cannot properly be based on speculation. A rejection must be made on a factual basis. See, in this regard, <u>In re GPAC, Inc.</u>, 35 USPQ2d 1116 at 1123 (Fed. Cir. 1995) and <u>Ex parte Haymond</u>, 41 USPQ2d 1217 at 1220 (Bd. Pat. App. & Int. 1996).

Nehab does not need such a controller and the only suggestion for having such a controller is in Applicants' own disclosure. This motivational statement is based on improper hindsight reconstruction of Nehab in view of Applicants' disclosure.

The first requirement of proper motivation is that a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In reDembiczak, 175 F.3d at 1000, 50 USPQ2d 1614, at 1617 (Fed. Cir. 1999).

Applicants also respectfully point out that the rejection fails to demonstrate a clear and particular teaching to motivate one to modify Nehab. The alleged motivation is just an inference drawn by the Office Action from Nehab and thus is not a clear and particular teaching in Nehab. In fact, the inference in the Office Action clearly did not lead Nehab to make the asserted modification. The alleged motivation is nothing more than speculation and is actually based on Applicants' disclosure rather than Nehab's disclosure.

Moreover, the case law requires that for motivation to be proper, showing that something is feasible is not enough. Just because something may be feasible does not mean that it is desirable or that one of ordinary skill in the art would be motivated to do what is feasible. See Winner International Royalty Corp. v. Wang, 53 USPQ2d 1580 (Fed. Cir. 2000)

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which points out that motivation to combine references requires a showing not just of feasibility, but also of desirability.

The only desirability of modifying Nehab to arrive at the claimed subject matter is found in Applicants' disclosure and it is fundamentally improper to use Applicants' disclosure against them.

Moreover, even if Nehab were modified as asserted in the Office Action, the resulting modification would not render the subject matter recited in claims 1 and 6 obvious for the reasons stated above, including the fact that claims 1 and 6 recite a goals outline and a presentation outline for the same document, not separate documents.

Accordingly, the subject matter of claims 1 and 6 is not rendered obvious by Nehab.

B.   Group II, Claims 2 and 7

With respect to the merits of claims 2 and 7, in addition to not showing the features of claims 1 and 6 as discussed above, Nehab does not display a goals outline which comprises organization of document information content on the display device and does not generate the goals outline based on the input that relates to the goals outline display. Moreover, Fig. 3A of Nehab is not disclosed as being displayed to a user. What is displayed to a user is shown, for example, in Fig 9. The user selects the personal document format and does not need to be presented with what is shown in Fig. 3A.

Accordingly, the subject matter of claims 2 and 7 is not rendered obvious by Nehab.

C.   Group III, Claims 3 and 8

With respect to the merits of claims 3 and 8, in addition to not disclosing the features recited in claims 1, 6 and 7 as discussed above, Nehab does not disclose or suggest a controller generating a logical structure of the goals outline, as recited in claims 3 and 8. The document prototype is part of the goals outline. Nehab does not disclose any goals outline document prototypes to be instantiated and selected by the input received through the user

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interface. While Nehab has a profile manager 38, the profile manager maintains document templates that specify how to format a personal newspaper, using predefined document templates, which specifies layout information, font information, style information, colors, etc. These templates are presentation templates, not goals outlines. Accordingly, the subject matter of claims 3 and 8 is not rendered obvious by Nehab.

D.   Group IV, Claims 4, 5 and 9

The Office Actions admit that Nehab does not disclose a card, as recited in claims 4, 5 and 9. To remedy this clear defect, the Office Action alleges that Applicants define a card as "merely where to store the data (page 5, lines 29-33)" and that it would be obvious to modify Nehab to include cards for storing data in memory "since the web sites storing information data for creating documents in Nehab (col. 4, lines 15-32) suggests the card database in memory." Applicants respectfully disagree with this allegation and point out that it is a prime example of hindsight reasoning. There is absolutely nothing in Nehab that discloses or suggests cards.

Moreover, Nehab does not have any instantiated document prototype to link with information contained in memory.

Claim 4 depends from claim 3, claim 5 depends from claim 4, and claim 9 depends from claim 8. Claim 4 recites that the memory contains a card and the features of linking the instantiated document prototype to the card selected by the input received through the user interface. Claims 5 and 9 recites generating a card and linking the card to the goals outline. Because Nehab does not recite the features of claim 3, for the reasons stated above, Nehab does not anticipate or render obvious the subject matter of claims 4, 5 and 9. Moreover, Nehab has no disclosure of a card or any disclosure of an instantiated document prototype to link with information contained in memory. The assertion in the Office Action that a card is merely where to store data is incorrect. Applicant's cards contain the actual hypermedia

information such as video, sound or text that make up the document. The contents of the points may be appropriated from either external sources or created from scratch by the author. Accordingly, claims 4 and 5 are neither anticipated nor rendered obvious by Nehab.

Nehab simply has no reason to use cards with hypermedia information, and the office Action fails to provide motivation that makes it desirable to modify Nehab to use cards with hypermedia information.

Accordingly, the subject matter of claims 2 and 7 is not rendered obvious by Nehab.

E.   Group V, Claims 10-12

With respect to claim 10, the final Office Action alleges that "Nehab also discloses generating a card based on the external information (col. 3, lines 15 to col. 4, lines 1-45). . ."

Not once in the asserted portion of Nehab does the word "card" appear. The term "hypermedia" appears in this passage as "hypermedia-linked computer network", but no hint of the term "card" appears. This is an indication that Nehab doesn't have any conception about using cards to contain hypermedia information to use to author a document, and actually teaches away from the obviousness of the claimed invention.

The rejection of claims 10-12 is based on improper speculation, and improper hindsight gained from a reading of Applicants' disclosure, which is the only disclosure which teaches using cards, as recited..

Nor does the Office Action let this clear mis-statement of fact stand in its way in its unwarranted leap to the conclusion that the claimed invention is obvious. Instead, the Office Action bootstraps itself based on this mis-statement and the conclusion that it would be obvious to use store a card in memory because it is well known in the art to store data in a memory after it has been created.

Applicants agree that it is well known to store data in memory after it has been created, but this statement is irrelevant to whether data should be stored in cards, especially

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where there is no disclosure in Nehab of storing authoring data in cards, nor of the desirability of modifying Nehab's system to do so. Accordingly, the subject matter recited in claims 10-12 is not rendered obvious in view of Nehab.

F.   Group VI, Claim 13

Claim 13 is not rendered obvious by Brewer.

The Office Action admits that Brewer does not explicitly disclose linking a goals outline comprising organization of document information content to a presentation outline based on the input and the data.

To overcome this admitted shortcoming, the Office Action alleges that Brewer suggests a goal outline, which is asserted to be the organization of the content of the office (which includes a desk, a cabinet and a trash can, where the cabinet contains drawers and the desk includes drawers containing files and a desktop, a calendar and an in/out basket) shown Brewer's Figs. 1-3. The Office Action also alleges that Brewer also discloses a presentation outline, which is asserted to be the presentation of the office with the positions of the desk, the cabinet and the trash can.

The linking of the organization of the office and the presentation of the office based on the input and the data is allegedly shown by the fact that the user can put the cursor on the drawer to pull the drawer open until the files the user is interested in appear in the window.

The Office Action admits that storing of data in memory is not shown but alleges that this would be obvious because "conventionally, the data when created should be stored in a memory for later use."

This rejection completely fails to take into consideration the fact that claim 13 recites a method of authoring a document. Brewer never discloses, suggests or even contemplates authoring a document. This rejection completely fails to address this positively recited

feature of claim 13 and, accordingly, fails to make out a prima facie case of obviousness of the claimed invention.

Furthermore, claim 13 positively recites "linking a goals outline comprising organization of document information" in the body of the claims, the word document referring back to the "authoring of a document" in the preamble of claim 13. Brewer has nothing to do with document authoring and the rejection completely omits consideration of this positively recited feature in both claims.

The only disclosure of a goals outline for authoring a document and a presentation outline for authoring a document is in Applicant's disclosure.

The Office Action is engaging in wholly impermissible hindsight reconstruction of Brewer based solely on Applicant's disclosure.

As the Court stated in In re GPAC Inc., 35 USPQ2d 116 (Fed. Cir. 1995), "[W]e believe that this statement by the Board in support of its rejection of claim 2 is conclusory and lacks the factual basis required to validate a claim rejection under section 103. See, In re Warner , 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967) ("A rejection based on section 103 must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. . . . [The Board] may not . . . resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis."), cert. denied, 389 U.S. 1057 (1968).

Brewer merely discloses a graphical user interface for accessing electronic data stored in a computer system. There is absolutely no disclosure of a method of authoring a document, or of a goals outline as recited or of a presentation outline as recited, or of linking a goals outline and a presentation outline as recited. The only basis for that disclosure is Applicant's disclosure. This rejection is a classic example of improper hindsight reconstruction of Applicant's invention based solely on Applicant's disclosure.

Also, the basis for modifying Brewer is not a clear and definite teaching, as required by the case law cited above. The alleged basis of the motivation to modify Brewer is that "the logical structure of the office image suggests the goal outline for creating such an image file and the layout of the office as seen in the figures suggests a presentation outline for an image file." This is not a clear and definite teaching. Rather it is perhaps the farthest stretch of imagination Applicants can conceive. It certainly was not apparent to Brewer. In fact, it only becomes apparent to one of ordinary skill in the art after reading Applicants' disclosure.

For at least the reasons outlined above, Applicant respectfully submits that Brewer fails to teach, disclose or suggest all of the features of claim 13, and that no proper motivation has been shown to radically modify Brewer to provide the subject matter of claim 13, which is totally missing from the Brewer disclosure. Thus, Brewer fails to render obvious the subject matter of claim 13. Accordingly, the subject matter recited in claim 13 is not rendered obvious in view of Brewer.

G.   Group VII, Claim 14

Claim 14 depends from claim 13, and contains all the features recited in claim 13. Thus, claim 14 is distinguishable from Brewer at least for the reasons stated above regarding claim 13.

Claim 14 additionally recites a meta-level display of the goals outline and the presentation outline , i.e., one of a kitchen image, an office image and a studio image. As noted above, Brewer does not disclose a goals outline or a presentation outline or a meta-level display of a goals outline and a presentation outline in any manner, let alone in the manner of authoring a document. Brewer discloses no relationship between a goals outline or a presentation outline of a document authoring method and Brewer's display of an office. That relationship is found only in Applicants' disclosure, and Applicants' disclosure cannot be

properly used against them. Accordingly, the subject matter recited in claim 14 is not rendered obvious in view of Brewer.

VII.   CONCLUSION

For at least the reasons outlined above, Nehab does not render obvious claims 1-22 under 35 USC §103(a), and Brewer does not render obvious claims 13 and 14 under 35 USC §103(a). Thus, claims 1-22 define subject matter that is patentable over the applied references.

The Honorable Board is requested to reverse the rejections set forth in the Final Rejection and return the application to the Examiner to pass this case to issue.

Respectfully submitted,

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Enclosure:
        Appendix

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APPENDIX OF CLAIMS

1.   (Amended) A document authoring device for a document which contains a

goals outline and a presentation outline, comprising:

        a user interface;

        a memory;

        a controller coupled to the user interface and the memory, wherein the

        controller links the goals outline and the presentation outline of the document

        together based on an input received through the user interface and data stored

        in the memory to at least partially author the document, and further wherein

        the goals outline comprises organization of document information content and

        the presentation outline comprises appearance characteristics of the document.

2.   The device of claim 1, wherein the user interface includes a display device, the

        controller displaying a goals outline display on the display device and

        generating the goals outline based on the input that relates to the goals outline

        display.

3.   The device of claim 2, wherein the memory contains at least one document

        prototype, the controller generating a logical structure of the goals outline by

        instantiating the document prototype selected by the input.

4.   The device of claim 3, wherein the memory contains a card, the controller

        linking the instantiated document prototype to the card selected by the input.

5.   The device of claim 3, wherein the controller generates a card and links the

        card to the goals outline based on the input.

6.   (Amended) A method of authoring a document which contains a document

        goals outline and a document presentation outline, comprising:

storing data in memory;

receiving an input through a user interface; and

linking the goals outline to the document presentation outline based on the input and the data to at least partially author the document, wherein the document goals outline comprises organization of document information content and the presentation outline comprises appearance characteristics.

7.   The method of claim 6, further comprising:

displaying a goals outline display on a display device; and

generating the goals outline based on the inputs that relates to the goals outline display.

8.   The method of claim 7, further comprising:

generating a logical structure of the goals outline by instantiating a document prototype selected by the inputs; and

linking the instantiated document prototype to a card selected by the inputs.

9.   The method of claim 8, further comprising:

generating a card; and

linking the card to the goals outline based on the inputs.

10.   (Amended) A method of authoring a document, comprising:

storing data in a memory;

receiving inputs through a user interface;

linking a goals outline comprising organization of document information content to a presentation outline based on the inputs and the data;

receiving external information by the controller;

generating a card based on the external information; and

storing the card as data in the memory.

11.   The method of claim 10, wherein the generating an imported card step accepts the external information already in a desired card structure as the imported card.

12.   The method of claim 10, wherein the generating an imported card step translates the external information into a desired card structure.

13.   (Amended) A method of authoring a document, comprising:

storing data in a memory;

receiving inputs through a user interface;

linking a goals outline comprising organization of document information content to a presentation outline based on the input and the data; and

displaying on the display device a meta-level display of the goals outline and the presentation outline.

14.   The method of claim 13, wherein the meta-level display is one of a kitchen image, an office image, and a studio image.